**Modification of the Activity Bot Navigation V 2.0**

If you are modifying your Activity Bot to move by means other than high speed servos with encoders, you will need to do the following:

1. Remove the encoders and the high speed servos. Store them in a zip-lock bag.

2. BEFORE MOUNTING THE SERVOS YOU SHOULD CHECK THAT THEY ARE PROPERLY CALIBRATED. You do that by sending a continuous string of pulse out 1500 μ s pulses and carefully and gently adjusting the calibration screw on the servo until it is stationary when the pulses are arriving. See the instructor if you need help with this step. He may have a handy means of calibrating the servos.

3. Install Continuous Rotation Servos. Look carefully at the directions. Some modifications require the servos to be mounted to the frame from the OUTSIDE of the chassis, and others from the INSIDE. If you are not absolutely sure of what this means, speak to the instructor. A mistake here can cost you a lot of time and effort later on.

4. Continuous rotation servos are controlled using what is called pulse width modulation. You send a series of pulses to the servo at 20 ms intervals. The width of the pulse determines how the servo moves. A pulse of 1300 µ sec makes the servo move full speed CW, 1500 µ sec makes it stand still, and 1700 µ sec makes it move full speed ccw.

5. After you have the servos installed try using the following program. It should make the servo on pin 12 move ccw, then stop, then move cw.



6. You then modify the program so that it uses pin 13 to make the other servo move.